

REMARKS/ARGUMENTS

In the Office Action mailed July 20, 2009, claims 1-23 were rejected. In response, Applicants hereby request reconsideration of the application in view of the below-provided remarks. No claims are amended, added, or canceled.

Claim Rejections under 35 U.S.C. 103

Claims 1-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson (U.S. Pat. No. 6,892,253, hereinafter Robertson) in view of Myers (U.S. Pat. Pub. No. 2002/0146023, hereinafter Myers) further in view of Bender et al. (U.S. Pat. No. 5,664,223, hereinafter Bender). However, Applicants respectfully submit that these claims are patentable over Robertson, Myers, and Bender for the reasons provided below.

Independent Claim 1

Claim 1 is patentable over the combination of Robertson, Myers, and Bender because the Office Action does not establish a *prima facie* rejection of the claim. Claim 1 recites:

Device for writing data elements from a coprocessor into a FIFO memory, in a multiprocessing environment comprising at least one coprocessor, a FIFO memory and a controller, said device comprising:

a first counter for counting the available room in said FIFO memory;

a second counter for counting the number of data elements written into said FIFO memory;

control means coupled to the first and second counters, wherein the control means is configured for checking said first counter for available room in said FIFO memory, for checking said second counter whether a predetermined number N of data elements have been written into said FIFO memory, for decrementing the count of said first counter and for incrementing the count of said second counter after a data element has been written into said FIFO memory; and

output means for outputting data elements to said FIFO memory, wherein the output means comprises a first connection to the control means, a second connection to the FIFO memory, and a third connection to the controller, wherein the control means connects between the counters and the output means, and the output means connects between the control means and the controller;

wherein said control means is adapted to issue a first message when the count of said second counter has reached said predetermined number N by incrementing of the count of said second counter after a data element has been written into said FIFO memory;
wherein said control means is adapted to issue a first call for available room in said FIFO memory to said controller; and
wherein said output means is adapted to forward said first message and said first call to said controller.
(Emphasis added.)

In support of the rejection, the Office Action appears to rely on Robertson as purportedly teaching the first and second counters, control means, and output means. Office Action, 7/20/09, page 3. However, even if Robertson were to teach the indicated elements, the Office Action acknowledges that Robertson does not teach such elements in the claimed arrangement. Specifically, the Office Action states “Robertson does not explicitly disclose the claimed control means, output means, controller, FIFO and counter arrangement or interconnection....” Office Action, 7/20/09, page 4 (emphasis added). In other words, the Office Action recognizes that Robertson does not teach control means coupled to first and second counters. Also, the Office Action recognizes that Robertson does not teach output means with a first connection to the control means, a second connection to a FIFO memory, and a third connection to a separate controller.

In order to remedy this lack of teaching by Robertson, the Office Action relies on Myers as purportedly teaching the specific arrangement recited in the claim. In particular, the Office Action states “In the same field of endeavor, Myers teaches a transport stream multiplexor utilizing smart FIFO meters wherein a broadest reasonable interpretation of applicant [sic] claimed functional element arrangement is disclosed (*Myers Fig. 1, 3, 9, 11*).” Office Action, 7/20/09, page 4 (underlining added). Thus, the reasoning presented in the Office Action relies on a general reference to Figs. 1, 3, 9, and 11 of Myers in order to show the specific arrangement of the first and second counters, control means, and output means recited in the claims of the present application. Also, with further reference to Myers, the Office Action states that “element 102 map[s] to the claimed output means, elements 110, 108, 106, 104, map[] to the claimed FIFO(s); elements 116 and/or 114 map[] to the claimed controller, element 112 map[s] to the

claimed control means; and the elements within 112 – depicted in more detail in Fig. 3 of Myers map[] to the claimed counters.” Office Action, 7/20/09, page 8 (italics removed).

Even if Myers were to teach a general arrangement of components as asserted in the Office Action, the proposed combination of the teachings of Myers and Robertson is nevertheless improper. In fact, the rejection of claim 1 is improper and should be withdrawn because the Office Action does not establish a *prima facie* rejection for the claim. In order to establish a *prima facie* rejection of a claim under 35 U.S.C. 103, the Office Action must present a clear articulation of the reason why the claimed invention would have been obvious. MPEP 2142 (citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. __ (2007)). The analysis must be made explicit. *Id.* Additionally, rejections based on obviousness cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

Here, the Office Action fails to provide articulated reasoning with some rational underpinning to support the asserted conclusion of obviousness. In support of the combination of the teachings of Myers with Robertson and Bender, the Office Action states:

[I]t would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the functional elements [of Robertson] such that they would be interconnected as claimed and as shown in Fig. 3, 9, 11 of Myers because not only would the interconnections facilitate the proper operation of the invention, but also because the number of ways that 5 functional components may be interconnected is finite, and it would have been within the purview of a skilled artisan to select one of several know [sic] and finite interconnections for a plurality of functional elements. Office Action, 7/20/09, pages 5-6 (emphasis added).

From this statement, it appears that the reasoning presented in the Office Action relies on two possible rationales. First, the Office Action relies on a conclusion that interconnecting structural or functional elements in the manner claimed would facilitate the proper operation of the claimed invention. Second, the Office Action relies on a conclusion that the arrangement of elements would be obvious as one of only a finite number of possibilities.

In regard to the first possible rationale, while it is not clear which “invention” is referred to in the Office Action (the “invention” of the present application or an “invention” of one of the cited references), the assertion that connecting components in the manner claimed would facilitate operation of the invention of the present application does not address the proposed combination of cited references. Rather, such a statement appears to merely support the operation of the present invention, without supporting a combination of the teachings from the cited references. Moreover, to the extent that the Office Action relies on the operations described in the present application as support for the proposed combination of cited references, such reliance would be improper because it relies on impermissible hindsight. In other words, the Office Action’s reliance on the reasoning described in the present application is improper and cannot be used to support for the proposed combination of cited references.

In regard to the second possible rationale, the Office Action concludes that it would purportedly be obvious to implement the recited arrangement of elements because a finite number of elements can only be connected together in a finite number of ways. As a general statement, this assertion may be practical, but this general statement regarding a finite number of ways to connect a finite number of elements does not address or establish a reason for the specific arrangement recited in the claims. Moreover, the fact that an arrangement is possible, does not show a reason why one skilled in the art might be motivated to implement the specific arrangement. In fact, depending on the functionality of each element, there are several possible arrangements using a finite number of elements, many of which simply would not result in an overall functional system.

Additionally, this line of reasoning requires additional findings by the Examiner, which are not provided in the Office Action. In general, this type of argument relies on an “obvious to try” argument. In order to support an “obvious to try” argument, the Examiner must articulate four separate findings:

- 1) A finding that at the time of the invention, there had been a recognized problem or need in then art, which may include a design need or market pressure to solve a problem;

- 2) A finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem;
- 3) A finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success; and
- 4) Whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

MPEP 2143(E) (underlining added).

Here, the Office Action fails to satisfy at least the first two requirements because the Office Action does not attempt to identify a recognized problem in the art to which the combination of teachings might have been directed. While each cited reference apparently addresses a separate problem by itself, there is no assertion or finding of any recognized problem or need for the proposed combination, other than to rely on impermissible hindsight in addressing issues that are only described in the present application. More specifically, there is no assertion or finding of a recognized problem or need in the art, at the time of the invention, for which one skilled in the art might pursue different arrangements of the components described in the proposed combination of Robertson, Myers, and Bender.

Therefore, the Office Action fails to establish a *prima facie* rejection for claim 1 because the Office Action does not provide articulated reasoning with a rational underpinning to show why the specific arrangement recited in the claims might be obvious. In particular, the Office Action does not establish any findings of a recognized problem or need for which a finite number of arrangements might provide a potential solution with a reasonable expectation of success. Accordingly, Applicants respectfully submit that the rejection of claim 1 under 35 U.S.C. 103(a) should be withdrawn because the Office Action fails to establish a *prima facie* rejection.

Independent Claims 7, 12, and 18

Applicants respectfully assert independent claims 7, 12, and 18 are patentable over the proposed combinations of cited references at least for similar reasons to those

stated above in regard to the rejection of independent claim 1. Each of these claims recites subject matter which is similar to the subject matter of claim 1 discussed above. Although the language of these claims differs from the language of claim 1, and the scope of these claims should be interpreted independently of other claims, Applicants respectfully assert that the remarks provided above in regard to the rejection of claim 1 also apply to the rejection of these claims.

Dependent Claims

Claims 2-6, 8-11, 13-17, and 19-23 depend from and incorporate all of the limitations of the corresponding independent claims 1, 7, 12, and 18. Applicants respectfully assert claims 2-6, 8-11, 13-17, and 19-23 are allowable based on allowable base claims. Additionally, each of claims 2-6, 8-11, 13-17, and 19-23 may be allowable for further reasons.

CONCLUSION

Applicants respectfully request reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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